GROZIN, Boris Dmitriyevich; DRAYGOR, David Abramovich, doktor tekhn.nauk; SEMIROG-ORLIK, Vsevolod Nikolayevich, kand.tekhn.nauk; PUZANOV, Mikhail Apollonovich, kand.tekhn.nauk; GORB, Matvey L'vovich, kand.tekhn.nauk; YANKEVICH, Vil'yam Fedoseyevich, inzh.; SINYAVSKAYA, Mariya Dmitriyevna, inzh.; VAL'CHUK, Georgiy Iosifovich, inzh.; KRAMAROV, V.S., prof., doktor tekhn.nauk, retsenzent; TYNYANYY, G.D., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn.red.

[Increasing operating safety of machine parts] Povyshenie ekspluatatsionnoi nadezhnosti detalei mashin. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1960. 292 p. (MIRA 14:1)

1. Chlen-korrespondent AN USSR (for Grozin).
(Machinery) (Mechanical wear--Testing)

GROZIN, B.D., otv.red.; DRAYGOR, D.A., zam.otv.red.; BARABASH, M.L., red.toma; KRAGEL'SKIY, I.V., red.; SERENSEN, S.V., red.; FAYNERMAN, I.D., red.; ZASLAVSKIY, S.S., red. Prinimali uchastiye: BRAUN, M.P., prof.; VAYNBERG, D.V., prof.; PETRENKO, I.P., kand.tekhn.nauk; SINYAVSKAYA, M.D., inzh.; SHEVCHUK, V.A., kand.tekhn.nauk; SEMIROG-ORLIK, V.N., kand.tekhn.nauk; YANKEVICH, V.F., inzh.; GORB, M.L., kand.tekhn.nauk; RAKHLINA, N.P., tekhn.red.

[Increasing the wear resistance and useful life of machinery in two volumes] Povyshenie iznosostoikosti i sroka sluzhby mashin v dvukh tomakh. Kiev, Izd-vo Akad.nauk USSR. Vol.1. 1960. 486 p. (MIRA 13:12)

1. Vsesoyuznoye nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskoye oblastnoye pravleniye. (Mechanical wear) (Mechanical engineering)

27921 S/123/61/000/017/004/024
A004/A101

1.1700

AUTHOR: Yankevich, V. F.

TITLE: Increasing the resistance to wear of steel by treatment with a high-temperature compressed gas stream

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 17, 1961, 15, abstract 17A101 ("Tr. 3-y Vses. konferentsii po treniyu i iznosu v mashinakh. v. 1". Moscow, AN SSSR, 1960, 93-98)

TEXT: The author suggests a method of treating metals with a compressed gas stream of high temperature to strengthen the surface layer of components. He investigated the changes in the surface layer of the 40X (40Kh) grade steel under the effect of a compressed gas stream (the combustion products of smokeless powder) at a pressure on the surface of up to 600 kg/cm^2 and a heating rate of up to 300,000 degrees/sec. Under these conditions, a uniform white layer of 75μ depth is formed, in which a martensite-austenite transformation and a carbon saturation of the metal is taking place which causes an increase in the resistance to wear.

[Abstracter's note: Complete translation]

Card 1/1

YANKEVICH, V.F.

27056
S/021/60/000/005/012/015
D210/D304

18.8100

AUTHORS: Brozin, B.D., Corresponding Member AS UkrSSR
Nyzhnyk, S.B., and Yankevych, V.F.

TITLE: Structural state of the white layer formed under the influence of a pulse stream of high-temperature gases

PERIODICAL: Akademiya nauk ukrayins'koyi RSR. Dopovidi, no. 5, 1960, 638-641

TEXT: The conditions of formation of the white layer due to a stream of gases are described by V.F. Yankevych (Ref. 9: DAN URSR, 480 (1957)). The velocity of heating in the experiments was 300 to 400 thousand deg. per second, that of cooling 80-100 thousand deg. per second. The velocity of thermal processes was determined from the oscillogram of temperature variation on the surface. The structure of the white layer on the X40 steel was studied with the aid of an electron microscope; more detailed information was obtained from X-ray analysis.

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27056
S/021/60/000/005/012/015
D210/D304

Structural state of the...

The white layer on X40 steel consisted of martensite; a small quantity of austenite was observed in the surface layer 10 mk thick. Initial structure of the steel: Temperature at 500°C after ordinary hardening. The martensite of the white layer has considerable displacement of the maximum of the (110)α line towards small angles in comparison with its position for the structure of the ordinary hardening; the doublet (101 ± 011) (110)α has no splitting. At the same time the width of (110)α line increases. For the (111)γ line of the thin surface layer, a considerable displacement of the maximum towards small angles is also characteristic. Data on the (110)α line are shown on Fig. 2. Local spectral analysis was made with the result that the carbon concentration increases by 0.2% only in the thin surface layer, not in other layers. The concentration of other elements in the white layer (Mn and Cr) does not change. Theoretical explanation of experimental data is attempted. There are 2 figures and 12 references: 9 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: D. Clayton, C. Jenkins, The Institute of Physics, London, 1, 69 (1951); F.E. Worner, B.L. Averbach, M. Cohen,

Card 2/3

27056
S/021/60/000/005/012/015
D210/D304

Structural state of the...

Trans. Amer. Soc. Metals, 49, 832 (1957).

ASSOCIATION: Instytut budivel'noyi mekhaniky AN URSR (Institute of Structural Mechanics, AS UkrSSR)

SUBMITTED: December 12, 1959

Legends to Fig. 2: (1) Change of width of the (110)α line and displacement of interference maximum in relation to the depth of the white layer. On the left: (2) Width of the (110)α line, a, radians; On the right: (3) Double of the displacement angle, B, mm 28; Below: (4) Depth of layer, mk.

Card 3/3

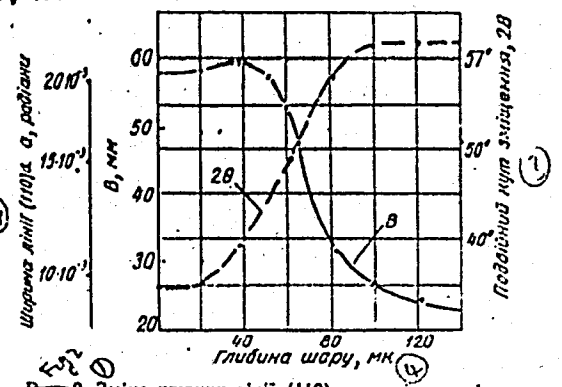

Рис. 2. Зміна ширини лінії (110)α та зміщення інтерференційного максимуму в залежності від глибини «білого» шару.

55976
S/711/60/014/000/006/013
D262/D301

18.8310

AUTHOR: Yankevich, V.F.

TITLE: Changes in structure and composition of steel surface layers caused by a stream of compressed gases at high temperature

SOURCE: Akademiya nauk SSSR. Institut mashinovedeniya. Treniye i iznos v mashinakh, v. 14, 1960, 171 - 184

TEXT: The purpose of this article is to explain the causes of erosion of the surface layers of a piston ring of an aircraft engine. The following instruments and devices were used: The apparatus ПМТ -3 (PMT-3) to determine the micro-hardness of the surface layers, X-ray equipment and the installation УРС-50 (URS-50) for radiometallography, and the spectrograph КСА-1 (KSA-1) for spectrum analysis. Piston rings made of steels: 38ХМЮА (38KhMYuA) and Х12М (Kh12M) and cast irons: ПЛЧ-1 (PLCh-1) and ХТВ (KhTV) were subjected to various chemical and thermal treatments before testing. The results of the test were tabulated, the obtained radiographs analyzed and the following general conclusions reached: Destruction by

Card 1/2

erosion of piston rings is linked with the action of gases breaking through the gap between the ring and the cylinder. Changes in the metal composition of the surface layers are observed as well as the formation of high dispersion structures consisting of carbides, and the plastic deformation of the surface layers. To explain the changes in the composition of the surface layers the hypothesis of the selective carrying away of the particles of some structural components is proffered. The improved running-in of the cylinder and the piston ring should help to avert the destruction caused by the erosive action of the gases. There are 3 figures, 1 table and 7 Soviet-bloc references.

Card 2/2

S/514/61/000/005/010/014
I001/I207

AUTHORS: Grozin, B.D., Samarot-Orlik, V.N., and Golovinskaya, T.M., Mizhnik, S.B., Yankevich, D.F.

TITLE: Structural transformations during grinding

SOURCE: Akademiya nauk SSSR. Komissiya po tekhnologii mashinostroyeniya. Seminar po kachestvu poverkhnosti. Trudy no.5, 1961. Kachestvo poverkhnosti detaley mashin; metody i pribory, uprochneniye metallov, tekhnologiya mashinostroeniya, 277-282

TEXT: Results are reported on investigations carried out to aid in selecting suitable grinding technology taking into account the structural transformations connected with different machining conditions. Steel specimens were subjected to varying maching conditions rough grinding with a peripheral velocity of the grinding disc, — 46 m/sec and a transversal feed — 1.2/m/min; fine grinding on the same disc but with manual feed; hand lapping by means of cast-iron laps. After machining the test specimens were subjected to electron microscope examinations, which revealed the existence of four distinct zones caused by varying machining conditions.

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3/5.14/61/000/005/010/014
I001/I201

Structural transformations....

From here the conclusion may be drawn on the importance of structural transformations connected with the service life of components, for the selection of a suitable grinding technology. There are 5 figures.

Card 2/2

YANKEVICH, V.F.

34442
S/185/61/006/006/024/030
D299/D304

18.1110

AUTHORS: Yankevych, V.F., and Bezruchko, I.V.

TITLE: Local spectral analysis

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 6, 1961, 861 - 866

TEXT: The development of local spectral analysis for steel is of great importance for study of changes in concentration during diffuse saturation of metals, for the study of gaseous erosion, friction etc. The authors developed a method of local quantitative spectral analysis of carbon in steels (as well as of some other elements), for studying diffusion processes during the action of powder gases on the metal. In such a method of spectral analysis, great accuracy of electrode mounting is required. For this purpose, the authors designed a special support which provides for the required accuracy and also permits carrying out the analysis when the specimen is in motion. In earlier experiments it was found that the most convenient size of the discharge gap was 0,7 mm. The choice of

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Local spectral analysis

optimal exposure is also important in the spectral analysis of the carbon content in steel. It was found that with long exposures on the spectrograph КСА-1 (KSA-1) (which has large dispersion), the ratio of blackening of the carbon- to iron lines is half the corresponding value for the spectrograph ИСП-28 (ISP-28) (with medium dispersion). Therefore, it can be assumed that in this case diffusion processes in the discharge gap have an important role. Another significant factor in determining the carbon content is the type of support electrode. Best results were obtained with a magnesium electrode; it was found that in this case the specimen surface is much more even than with electrodes of other material. The electrode diameter is also a factor to be taken into account; if the diameter exceeds 1.8 mm, the specimen surface becomes uneven; the surfaces were most even, for a diameter of 1.4 mm. The method of removal of the layers which were already treated by the discharge, is also very important in local spectral analysis. The experiments were conducted on steel specimens Х12М (Kh12M), which have 2 structural components: Sorbite and carbide, with greatly divergent physico-mechanical properties. The specimens were treated differently, (abra-

Local spectral analysis ...

sion and polishing). Protuberances were observed on the polished surface; a metallographic investigation showed that these were carbides. Specimens of steel 20 and Y-10 (U-10) were analyzed; it was found that even if the powder gases are active for a short time only (0.002 sec.), a considerable saturation with carbon takes place in the surface layer to a depth of 15 μ. The above method was used for studying the diffusion processes during the erosion of piston rings of certain types of internal combustion engines. The atomic carbon which is formed, penetrates the surface layers of the piston rings, forming brittle iron carbide. There are 6 figures and 2 Soviet-bloc references.

ASSOCIATION: Instytut mekhaniky AS UkrRSR (Institute of Mechanics of the AS UkrRSR, Kyyiv)

X

YANKEVICH, V.F., kand.tekhn.nauk

Erosion of piston rings in internal combustion engines. Vest. mash. 41 no.6:27-30 Je '61. (MIRA 14:6)
(Piston rings)

S/129/62/000/009/003/006
E193/E583

AUTHORS: Grozin, B.D., Corresponding Member of the Academy of Sciences, UkrSSR, Nizhnik, S.B., Engineer, and Yankevich, V.F., Candidate of Technical Sciences

TITLE: Structural changes in steel subjected to the action of a jet of hot compressed gases

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, no.9, 1962, 13-16

TEXT: The object of the present investigation was to study the effect of ultra-rapid heating and cooling on the structure and constitution of thin surface layers of steel 45 specimens, given various preliminary heat treatments (hardening, hardening and tempering at 200 or 600°C). Rapid heating was attained by detonating a charge of a smokeless, explosive powder and passing the compressed combustion products through a narrow (0.7 mm) gap between the end faces of two cylindrical specimens mounted in a specially designed apparatus. The temperature attained at the metal surface was assessed from the temperature of the gases at the exit end of the gap, measured with a Fe/W thermocouple and

recorded with the aid of an oscillograph. It took 0.0035 sec for the compressed gases to pass through the gap; the surface temperature of the steel specimens rose in this time interval to 900-1000°C which means that heating rates of 300 000 - 400 000°C/sec were attained, the subsequent cooling rate through the 1000-500°C range being 80 000 - 100 000°C/sec. After each experiment the microstructure of the specimens was examined, the chemical composition of the surface layer was determined by spectrographic analysis of consecutive layers removed by anodic dissolution, and the constitution of the surface layer was studied by X-ray diffraction analysis of the specimen surface exposed by each consecutive anodic dissolution operation. The results can be summarized as follows. (1) In spite of the extremely short duration of the heating pulse, both C and N, present in the gases, diffused into steel to a depth of 10 μ, leading to the formation of austenite containing both these elements. (2) Rapid heating under a high pressure and subsequent rapid cooling to 500°C, followed by relatively slow cooling below this temperature, caused secondary hardening and accelerated tempering of the surface layers of the steel specimens. The resultant structural changes

were reflected in the formation of a double surface layer. The outer layer (more difficult to etch than the core of the specimen) consisted of martensite and residual austenite containing C and N; the inner part of this layer, not affected by the diffusion of C and N, consisted of martensite only. The inner layer, etching more readily than the core of the specimen, consisted of the products of high temperature tempering. The total thickness of the heat-affected surface layer was 300 μ. (3) The constitution of the outer surface layer was determined by the temperature gradient during rapid heating through the temperature range above the critical point. The structure of the inner, tempered layer differed from that obtained by normal tempering at similar temperatures: it was characterized by the presence of a sub-structure, a higher degree of dispersion of the carbide phase, higher microhardness, and a different lattice parameter. There are 4 figures and 2 tables.

ASSOCIATION: Institut mekhaniki AN UkrSSR
(Mechanics Institute AS UkrSSR)

GROZIN, B.D.; YANKEVICH, V.F.

Structure of white layers. Tren.i izn.mash. no.15:167-177 '62.
(MIRA 15:4)

(Metallography)

S/048/62/026/007/012/030
B104/B138

AUTHORS: Yankevich, V. F., and Bezruchko, I. V.

TITLE: Investigation of processes occurring in the surface layer of a metal during spectrum analysis

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 7, 1962, 884-887

TEXT: The entry of carbon from steels into the arc of a discharge was examined with a stereomicroscope, a profilograph, and a spectrograph. It was found to be dependant on the diameter and shape of the magnesium electrode, on the duration of discharge, etc. Investigation of the change in carbon concentration in the surface layer during h-f discharge shows that, particularly in local spectrum analysis, diffusion in the surface layer must be taken into account, and the layer formed during the first picture of the spectrum must be removed before taking a second picture. There are 3 figures.

Card 1/1

GROZIN, B.D.; NIZHNIK, S.B., inzh.; YANKEVICH, V.F., kand.tekhn.nauk

Structural changes in steel under the effect of a flow of high temperature compressed gases. Metalloved. i term. obr. met. no.9: 13-16 S '62. (MIRA 16:5)

1. Institut mekhaniki AN UkrSSR. 2. Chlen-korrespondent AN UkrSSR (for Grozin).
(Steel—Metallography) (Metals, Effect of temperature on)

YANKEVICH, V.F. [IAnkevych, V.F.]; BEZRUCHKO, I.V.

Subsurface local spectrum analysis. Ukr.fiz.zhur. 6 no.6:861-866 N-D '61. (MIRA 16:5)

1. Institut mekhaniki AN UkrSSR, Kiyev.
(Spectrum analysis)

YANKEVICH, V.F.; BEZRUCHKO, I.V.

Mechanism of the admission of a substance from the electrode surface during microscopal analysis. Zav.lab. 29 no.12:1447-1449 '63. (MIRA 17:1)

1. Institut mekhaniki AN UkrSSR.

YANKEVICH, V.F.; BEZRUCHKO, I.V.

Stand for localized spectral analysis. Zav. lab. 30 no.5: 628-629 '64. (MIRA 17:5)

1. Institut mekhaniki AN UkrSSR.

YANKEVICH, V. L.

15

Ukrayins'kyy fizichnyy zhurnal, v. 8, no, 4, Apr 1963, 498-500.
S/185/63/008/004/015/015

A scientific conference devoted to problems of evaporation, combustion, and gas dynamics of dispersed systems was held at Odessa State University imeni I. M. Mechinikov from 1 to 6 October 1962. Sixty-five papers were presented, 24 of which dealt with the theory and practice of production and stability of aerosols and the effect on these processes of various physicochemical factors; the other 41 were working processes in combustion chambers of various power plants. Some of the titles were "Investigating oxidation processes of high hydrogenous fuels by oxygen from compressed air," S. S. Kremarenko; "Burning of metal suspension in hydrocarbon fuels," D. I. Polishchuk, L. P. Latonina, and V. L. Yankevich; and "Experimental investigation of two-phase flow in axially-symmetrical nozzles," G. A. Komov. Included also were discussions of the methods of solving equations of dissociating gas flow in ducts and gas dynamic calculations for jet engines, G. A. Varshavskiy, E. Ya. Guber, and A. P. Kisel'ov; the formation of plane shock waves in shock tubes and passage of shock waves through a flame front, D. V. Fedoseyev, G. D. Sadamandr, and I. K. Sevast'yanova; experimental results on the flow of combustion products of a methane-oxygen mixture around cambered surfaces with diffraction of detonation waves, L. G. Gvozd'eva; the stability of a steady-state flame front S. K. Aslanov; the relationship between the flame and the diameter of a burning drop, V. O. Fedoseyev; and theoretical and experimental investigation of burning of spherical metal particles, by L. A. Klyachko.

[AS]

Card 2/2

YANKEVICH, V.V.

111-58-5-8/27

AUTHOR: Yankevich, V.V., Chief Engineer of the Krasnoyarskiy Kray Administration of the Radio Relay Network.

TITLE: Rural Radio Experience in the Krasnoyarskiy Kray(Opyt radiofikatsii sel v Krasnoyarskom Kraye).

PERIODICAL: Vestnik Svyazi, Nr 5, 1958, pp 14-16 (USSR).

ABSTRACT: A general review of rural radio development is given. During 1954 to 1957, 584 rural radio stations and more than 8,000 km of radio relay pole lines were built and 20,000 km of wires were strung. Over these years, the total number of rural radio points increased by 134,000 instead of the 118,000 planned. Of these "radio points" 86,000 were installed in the houses of kolkhoz peasants. The communication workers of the Khakas autonomous oblast', as well as those of the Shushensk, Rubinsk, Bogotol'sk, Kansk and other rayons of the kray were the first to obtain these "points". The foreman of the "SMUR" A.G. Alberov, the assembling workers of the "SMUR" V.E. Korostylov, A.S. Pchel'nikov, B.F. Romanika, V.S. Tukalov and others contributed much to the achievement of the plan. The "SMUR" was assisted by the workers of the rayon communication offices N.E. Goryachev(Beysk Communication Office), F.M. Matveyev (Krasnoturansk Communication Office), N.M. Tsysar'(Kansk

Card 1/2

Rural Radio Experience in the Krasnoyarskiy Kray

Communication Office), M.M. Burmakin(Taseyev Communication Office) and others. Many chiefs of the rayon communication offices, such as A.K. Shestak, L.I. Sipkin and V.E. Tolstykh also helped. The rural region of the kray has more than 1,000 radio stations and 113,000 radio points connected by a vast radio relay network. In 1957, the total time of interruptions on this net amounted to 100,000 hours or 4.6% of the broadcasting plan. The causes of these interruptions, as well as the bad state of the rural radio relay network are described.The small radio stations will be gradually eliminated and their respective networks will be connected with neighbouring radio stations. There are 2 photos.

AVAILABLE: Library of Congress

Card 2/2 1. Radio-Development

8(2)

05393
SOV/107-59-8-13/49

AUTHOR: Mikhaylov, V., Director, Suprunenko, B., Yankevich, V.

TITLE: A Radio-Controlled Tractor

PERIODICAL: Radio, 1959, Nr 8, pp 17 - 18 (USSR)

ABSTRACT: Remote controls for a DT-54, tractor to be used for ploughing, were developed at the plant "Kraspromavtomatika". An R-106 transmitter working on 46.1 - 48.65 Mc is equipped with a simple audio frequency oscillator producing six frequencies in the range from 200-325 cycles. The transmitter has a range of 3 km and is powered by 2NKN-24 batteries. The antenna is 1.5 m long. A RUM-1 receiver and nine relays are installed on the tractor. The receiver reproduces the six different audio frequencies which cause oscillations of six resonance relay reeds. The vibrations of the reeds close the contacts of polarized relays, which in turn actuate the RKS-3 power

Card 1/3

A Radio-Controlled Tractor

relays. The power relays close the circuits of electromagnets operating the valves of the hydraulic system, which actuates the controls of the tractor. Six commands are possible, according to which the tractor will start or stop, turn right or left, raise or lower the plough. Six differently-colored lamps are mounted on the roof of the tractor, indicating the proper reception of the signal and the functioning of the controls. The receiver is mounted on rubber cushions. The polarized relays are suspended by springs to a common panel. The receiver may be fed from dry cells or from the battery installed on the tractor, using a transistorized converter. The transmitter of the RUM-1 remote control equipment, widely used for aircraft and ship models, proved inadequate, because of the low stability of the carrier and modulation frequency. Additional equipment is

A Radio-Controlled Tractor

now being designed which will enable a two-speed operation of the tractor. Safety devices must be developed to stop the tractor in case the oil pressure drops or the cooling water temperature exceeds a certain limit. In the future it will be possible to supply the receiver from the ac generator of the tractor. There are 2 photographs.

ASSOCIATION: "Kraspromavtomatika"

Card 3/3

MIKHAYLOV, V., inzh. (g. Krasnoyarsk); SUPRUNENKO, B., inzh. (g. Krasnoyarsk); YANKEVICH, V., inzh. (g. Krasnoyarsk)

Radio-controlled DT-54A tractor. Nauka i pered. op. v sel'khoz. 9 no.7:62-65 Jl '59. (MIRA 12:11)
(Tractors) (Radio control)

MIKHAYLOV, V.;SUPRUNENKO, B.;YANKEVICH, V.

Radio-controlled tractor. Trakt. i sel'khozmash. no.11:19-21 N '59.
(Tractors) (Automatic control) (MIRA 13:3)

MIKHAYLOV, V.A., inzh.; SUPRUNENKO, B.M., inzh.; YANKEVICH, V.V., inzh.

Radio-controlled tractors. Mekh.i elek.sots.sel'khoz. 17 no.5:51-53 '59. (MIRA 12:12)

1. "Krasnoyarskpromavtomatika" Krasnoyarskogo sovnarkhoza.
(Tractors--Radio control)

YANKEVICHUTE, Yu.K. [Jankevičiute, J.K.]

[Morphological changes in the lungs of children in hematogenic tuberculosis treated with streptomycin as determined by X-ray comparisons] Morfologicheskie izmeneniia v legkikh detei pri gematogennom tuberkuleze, lechennom streptomitsinom, v sopostavlenii s kliniko-rentgenologicheskimi nabliudeniiami; avtoreferat dissertatsii. Leningrad, 1954. 14 p. (MIRA 12:12)
(TUBERCULOSIS)

Yankevichyute Yu. K.

LITHUANIA/Zooparasitology - Parasitic Worms. G-2

Abs Jour : Ref Zhur - Biol., No 4, 1958, 14964

Author : Baubinas, Yankevichyute
Inst : -
Title : Peritonitis in Young Children Caused by Ascarides.

Orig Pub : Sveikatos apsauga, 1957, No 3, 43-46

Abstract : No abstract.

Card 1/1

USCOMM-DC-55,078

LASIENE, J., med. m. d-re; JANKEVICIUTE, V., med. m. kand.; STALIORAITYTE, E., med. m. kand.; LIUTKUS, L.

On the problem of the classification and terminology of tumors of the hematopoetic organs. Sveik. apsaug. 6 no.9(69):15-19 S '61.

1. Kauno Valst. medicinos instituto patologines anatomijos katedra. Katedros vedeja - med. m. d-re J. Lasiene.

(HEMATOPOIETIC SYSTEM neopl)

YANKEVICHYUS, Ya.

BAUBINIENE, A. doc.; ŽANKEVIČIŪTĖ, J., doc.; VITENSTEINAS, C., doc.;

Clinico-anatomical aspects in the diagnosis of myocardial infarction. Sveik. apsaug. 9 no.1:10-15 Ja'64.

1. Kauno Valst. medicinos institutas. Rektorius: prof. Z. Januskevicius.

YANKEVSKIY, N.V.

Cardiohemodynamographic observations in valvular lesions of the heart. Terap.arkh. 28 no.5:29-37 '56. (MLRA 9:10)

1. Iz fakul'tetskoy terapevticheskoy kliniki (zav. - deystvitel'nyy chlen AMN SSSR prof. A.I.Nesterov) II Moskovskogo meditsinskogo instituta imeni I.V.Stalina.

(BALLISTOCARDIOGRAPHY,
cardiohemodynamography in rheum. valvular lessions of heart (Rus))
(RHEUMATIC HEART DISEASE, physiology,
cardiohemodynamography (Rus))

YANKHONEN, E.N.

Pharmacy in Canada. Apt. delo 9 no. 5:79-82 S-O '60.
(MIRA 13:10)

1. TSentral'nyy aptechnyy nauchno-issledovatel'skiy institut.
(CANADA--PHARMACY)

YANKHONEN, E.N.

Essential features of the pharmaceutical service in the United States. Apt. delo 9 no.6:78-81 N-D '60. (MIRA 13:12)

1. TSentral'nyy aptechnyy nauchno-issledovatel'skiy institut.
(UNITED STATES—PHARMACY)

YANKHONEN, E.N.

Some problems of pharmaceutical services in England. Apt. delo 11 no.1:79-81 Ja-F '62. (MIRA 15:4)
(GREAT BRITAIN--PHARMACY)

SENOV, P.L., prof.; ZAYTSEV, V.A.; YANKHONEN, E.N.

Principal Soviet and foreign pharmaceutical journals. Apt. delo 11 no.1:83-87 Ja-F '62. (MIRA 15:4)
(PHARMACY—PERIODICALS)

YANKILEVICH, I.G.

Devices used for preventing conveyor belt breakdowns following slipping. Priborostroenie no.4:29 Ap '57. (MLRA 10:5)
(Conveying machinery)

YANKELEVICH, N.G., inzhener.

Preventing tugging in conveyer belts. Stroi.i dor.mashinostr. 2 no.3:35 Mr '57. (MLRA 10:5)

(Conveying machinery)

AUTHOR: Yankilevich, N.G. (Engineer) 100-4-11/16

TITLE: Protection of conveyor belts from tearing due to slipping. (Zashchita transporternykh lent ot razryva v rezul'tate buksovki).

PERIODICAL: "Mekhanizatsiya Stroitel'stva" (Mechanisation of Construction), 1957, Vol.14, No.4, p.26 (USSR).

ABSTRACT: Conveyor belts tear either due to increased tension in adjustment or due to overloading. In the latter case the velocity of the supporting pulley is higher than the velocity of the belt which is strained due to the increased friction. The Donugol' constructed a few types of "induction"-centrifugal relays : PCM and PKC. The general defects of all types of existing pulleys seem to lie in the necessity of accurate coupling with the leading pulley, in the type of the construction of the relay and that the speed of the leading pulley does not allow for the required coupling moment in the inductive system. Further shortcomings are: the fast rotation of the relay in the first phase, at the starting, causes slipping and "pulsation" of the shaft of the leading pulley; the necessary shortening of the passage between the conveyor belt and the wall of the gallery to 250-300 mm and finally, the necessary stopping of

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Protection of conveyor belts from tearing due to slipping. (Cont.)

100-4-11/16

the belt and dismantling the joint of the centrifugal relay. The new type of relay eliminates all these shortcomings and functions as follows: during rotation of the pulley ball-bearings are forcing out the lamellar springs by centrifugal force and displace the wheel; the latter discontinues the pressure on the springs and the contact wheel moves and locks the contact by action of the spring. The current is automatically switched on after contact has been made. The velocity of the pulleys decreases when danger of tearing occurs, the contact breaks and the power is cut off automatically. This improved conveyor belt, constructed by the
2/2 author, was tested in the Vysokogorsk iron ore mine in Nizhniy Tagil and proved to be very satisfactory.
There are 2 diagrams.

AVAILABLE:

YANKILEVICH, N.G.

Protecting conveyer belts from rupture. Ogneupory 22 no.7:325-326 '57. (MIRA 10:8)

1. Wysokogorskoye rudoupravleniye.
(Conveying machinery--Electric driving)
(Belts and belting)

YANKILEVICH, N.

Relay to prevent a break in conveyor belts. Mak.-elev.prom. 23 no.2:27 F '57. (MLRA 10:5)

1. Uralenergochermet.
(Conveying machinery)

YANKILEVICH, M.G., inzhener.

Protecting conveyer belts from breaking as a result of slipping. Elek. sta. 28 no.6:67-68 Je '57. (MIRA 10:8)
(Conveying machinery)

YANKELEVICH, N.G.

Protection against tearing of conveyer belts caused by slippage.
Bakh. prom. 31 no.4:38-39 Ap '57. (MIRA 10:6)

1. Uralenergochermet.
(Conveying machinery)

YANKILEVICH, N.G.

Instrument for determining iron content. Biul. tekh.-ekon. inform. no.3:14-15 '58. (MIRA 11:6)
(Magnetic instruments)

SOV-127-58-3-19/24

AUTHOR: Yankilevich, N.G., Engineer

TITLE: An Instrument for Determination of Iron Content in Tails of Unoxidized Magnetite Ores (Pribor dlya opredeleniya soderzhaniya zheleza v khvostakh neokislennykh magnetitovykh rud)

PERIODICAL: Gornyy zhurnal, 1958, Nr 3, pp 75-76 (USSR)

ABSTRACT: The author describes an instrument for determination of iron content in tails of unoxidized magnetite ores. The instrument consists of a dry transformer and of an aluminum cup which contains the sample to be examined. This cup is prepared so that it does not warm up when subjected to the action of the current in the induction coil. The whole device consists of the following elements connected as shown on the diagram: a tension stabilizer of 200 w, tension - 220 v; regulating autotransformer of the LATR-2 type for 220 v and 2a, a selenium (two half-periods) rod and a microamperemeter of direct current with a glass scale of 300 microamperes. The ore sample must be thoroughly dry and ground to the order of magnitude minus 0.3 - 0.5 mm. The cup is filled with this powder; the tension of the transformer is regulated so that the arrow of the manometer shows 100 divisions. The

Card 1/2

An Instrument for Determination of Iron Content in Tails of Unoxidized Magnetite Ores

cup with the ore is then placed in the transformer. The iron content is shown by the deviation of the manometer arrow over the 100 mark. The device is graded according to the samples with a known content of iron, and other ores content calculated accordingly. There is 1 diagram.

ASSOCIATION: Uralenergochermet

1. Iron—Determination
2. Iron ores—Processing
3. Electrical equipment—Performance

Card 2/2

YANKILEVICH, N.G.

AUTHOR: Yankilevich, N.G. 94-4-7/25

TITLE: Prevention of Breakages of Conveyor Belts (Zashchita transporternykh lent ot razryva)

PERIODICAL: Promyshlennaya Energetika, 1958, Vol.13, No.4, pp. 14 - 15 (USSR)

ABSTRACT: The most usual cause of failure of heavy-duty conveyor belts is slipping of the belt, so that the driving pulley runs faster than the belt, which becomes hot and brittle and breaks. Various types of induction centrifugal relays have been constructed to prevent belt slipping, but all suffer from disadvantages. For instance, they require accurate mechanical contact with the shaft of the driving wheel of the conveyor and step-up gearing has to be provided between the shaft and the relay. The author suggests a device that fulfils the function of an idling roller and centrifugal relay and is free from the enumerated defects. It has been made at the Vysokogorsk Iron Ore workings in Tagil and consists of a centrifugal relay fitted into an idling roller of the conveyor, the speed of which is sufficient to cause the contacts to close. The construction is illustrated diagrammatically in Fig.1 and a connection diagram is given in Fig.2. If the roller is not moving fast enough to

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close the contacts, the motor is switched off. Arrangements are made to by-pass the device when the starting button is pressed. The relay has proved reliable and effective in service; it is simple and does not need a mechanical drive from the conveyor mechanism. It is cheap and can also be used to replace the centrifugal relay for automatic control circuits for conveyors.
There are 2 figures.

ASSOCIATION: Uralenergochermet

AVAILABLE: Library of Congress

Card 2/2

BUN'KO, Viktor Aleksandrovich; VOLOTKOVSKIY, Sergey Andronikovich, doktor tekhn. nauk, prof.; YANKILEVICH, Naum Georgiyevich; PLOTNIKOV, K.S., otv. red.; ARZAMASOV, N.A., red.izd-va; KACHALKINA, Z.I., red.izd-va; SHKLYAR, S.Ya., tekhn. red.; PROZOROVSKAYA, V.L., tekhn. red.

[Automatic control in ore dressing plants] Avtomatizatsiia na obogatitel'nykh fabrikakh. Pod red. S.A.Volotkovskogo. Moskva, Gos. nauchno-tekhn.izd-vo po gornomu delu, 1961. 363 p. (Ore dressing--Equipment and supplies) (MIRA 15:3) (Automatic control)

YANKILEVICH, M.G., inzh.; RYSAKOV, N.F., kand.tekhn.nauk

Automation of boiler scavenging. Energetik no.9:5-7 S '64.
(MIRA 17:10)

GUBINA, G.P., YANKILEVICH, T.Ya.

Use of the alkaloid echinopsin in neurological practice [with summary in French]. Zhur.nevr. i psikh. 58 no.10:1218-1224 '58 (MIRA 11:11)

1. Vsesoyuznyy institut lekarstvennykh i aromaticheskikh rasteniy (dir. N.Ya. Itskov) i Gorodskaya klinicheskaya bol'nitsa No.52 (glavnyy vrach P.S. Petrushko), Moskva.

(NERVOUS SYSTEM, Dis. ther.,echinopsin (Rus))
(ALKALOIDS, ther. use echinopsin in N.S. dis. (Rus))

L 02351-67 EWT(l)/EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AR6025729 SOURCE CODE: UR/0058/66/000/004/A045/A045

54
B

AUTHOR: Yankelevich, Yu. B.

TITLE: Scintillation spectrometer for the investigation of energy and angle distributions of x-radiation behind different absorbers

SOURCE: Ref. zh. Fizika, Abs. 4A427

REF SOURCE: Izv. Tomskogo politekhn. in-ta, v. 138, 1965, 49-52

TOPIC TAGS: x ray spectroscopy, scintillation spectrometer, angular distribution, x ray absorption, x ray apparatus, flaw detection/ FEU-24 photomultiplier, AI-100 pulse height analyzer, RUP-200 x ray apparatus

ABSTRACT: A scintillation γ spectrometer is described, consisting of an NaI(Tl) crystal, an FEU-24 photomultiplier, a preamplifier, and a pulse-height analyzer (AI-100). The energy resolution of the spectrometer was 8.5% for 630-kev γ quanta and improved to 7% for 1.25-Mev γ quanta. The spectrometer was used to measure the radiation spectra at the output of the RUP-200 commercial x-ray apparatus and the energy spectra of the x-radiation behind the different absorbers (steel, aluminum, plastic, etc.) at different angles θ ($0° \leq \theta \leq 180°$). A preliminary reduction of the obtained data confirms the feasibility of flaw detection in materials with the aid of Compton-scattered and coherently-scattered x-radiation through different angles. [Translation of abstract]

SUB CODE: 20

Card 1/1

L 01939-67 EWT(d)/EWP(c)/EWP(k)/T/EWP(v)/EWP(l) IJP(c)

ACC NR: AR6028529 SOURCE CODE: UR/0276/66/000/005/B007/B007

AUTHOR: Gorbunov, V. I.; Kuznetsov, V. I.; Kuleshov, V. K.; Yankelevich, Yu. B.

51
13

TITLE: Spectrometric methods for flaw detection in materials

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 5B49

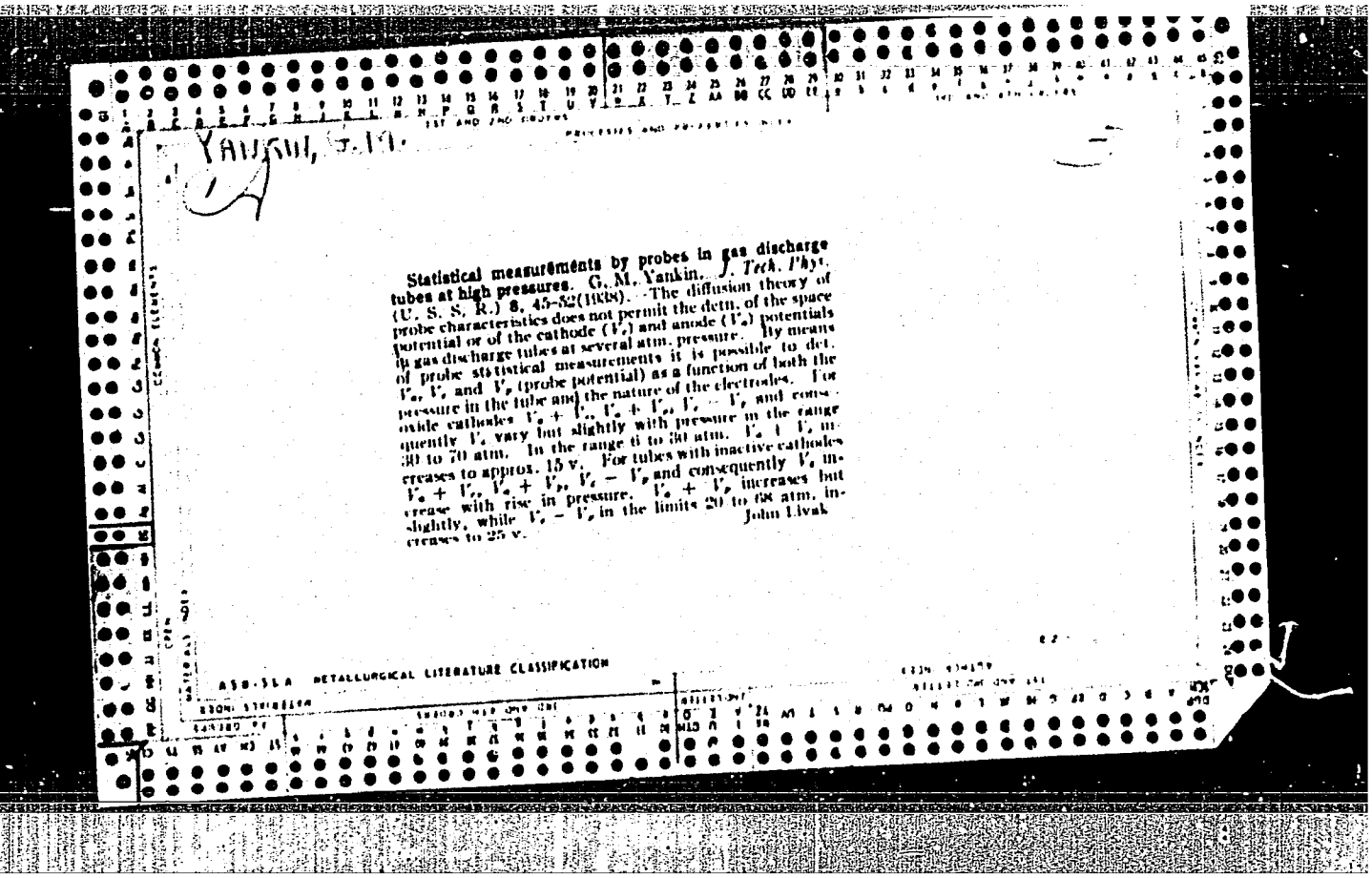
REF SOURCE: Izv. Tomskogo politekhn. in-ta, v. 138, 1965, 20-30

TOPIC TAGS: spectrometry, flaw detection spectrometry, retardation spectrometry, gamma radiation spectrometry, gamma detection, bremsstrahlung

ABSTRACT: The value of bremsstrahlung and gamma radiation spectrometry in practical use in flaw detection is outlined. An analysis of spectral emissions obtained back of absorbers of different thickness and density and an analysis of instrumental spectra allows a correct approach to the problem of optimal conditions for radioscopy of materials and products and thus considerably expand the control potentialities of flaw detection spectrometry. Orig. art. has: 8 figures and a bibliography of 12 reference items. L. Tsukerman. [Translation of abstract.] [AM]

SUB CODE: 20, 14, 11/

Card 1/1 hs UDC: 620.179.1



YAKUSHI, I. M.

Statistical measurements by probes in gas discharge tubes at high pressures. G. M. Yankin. *J. Tech. Phys.* (U. S. S. R.) 8, 45-52(1938). The diffusion theory of probe characteristics does not permit the detn. of the space potential or of the cathode (V_c) and anode (V_a) potentials in gas discharge tubes at several atm. pressure. By means of probe statistical measurements it is possible to det. V_a, V_c and V_p (probe potential) as a function of both the pressure in the tube and the nature of the electrodes. For oxide cathodes $V_a + V_c$, $V_a + V_p$, $V_c - V_p$ and consequently V_c vary but slightly with pressure in the range 30 to 70 atm. In the range ti to 30 atm. $V_a + V_c$ increases to appros. 15 v. For tubes with inactive cathodes $V_a + V_c$, $V_a + V_p$, $V_c - V_p$ and consequently V_c increase with rise in pressure. $V_a + V_p$ increases but slightly, while $V_c - V_p$ in the limits 20 to 68 atm. increases to 25 v.

John Livak

A58-51A METALLURGICAL LITERATURE CLASSIFICATION

YANKIN, G. M.

YANKIN, G. M. -- "Development of Methods of Activation and Electron-Optical Study of Cold Cathodes in Glow Discharge Lamps." Sub 23 Sep 52, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov. (Dissertation for the Degree of Candidate in Technical Sciences.)

SO: VECHERNAYA MOSKVA, January-December 1952

KAUFMAN, Mikhail Simonovich; YANKIN, Grigoriy Maksimovich; NILENDER, R.A.professor, redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor

[Electronic instruments] Elektronnye pribory. Pod red. R.A. Nilendera. Moskva, Gos. energ. izd-vo Pt. 1. 1957. 261 p. (MLRA 10:5)
(Electronic instruments)

Yankin, Grigoriy Maksimovich

PHASE I BOOK EXPLOITATION 451

Kaufman, Mikhail Simonovich and Yankin, Grigoriy Maksimovich

Elektronnyye pribory (Electronic Instruments) Pt. 2. Moscow, Gosenergoizdat, 1957. 319 p. 15,000 copies printed.

Ed. (title page): Nilender, R.A , Professor; Ed. (inside book): Shamshur, V.I.; Tech. Ed.: Fridkin, A.M.

PURPOSE: This book is approved as a textbook for the tekhnikums of the Ministry of the Radio-Engineering Industry and may be of use to persons concerned with the problems of manufacturing electric vacuum devices.

COVERAGE: Part two of this textbook deals with the fundamentals of designing receiving amplifiers and oscillator tubes, semiconductor devices, cathode-ray tubes, photocells, x-ray tubes, and so forth. It also contains information on the technology of electric vacuum devices. The authors thank

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the following personalities for reviewing the separate chapters of their manuscript: B.S Agafonov, L.N. Adrianova, V.F. Kavalenko, T.N. Rabotnova, A.A. Maslov, and N.V Cherepnin. They also thank for their help and criticism of separate chapters of the manuscript: G.A Zelikman, L.A. Kotomina, E.A. Levina, L.N. Manin, M.Ya. Mulyarov, and Professor R.A. Nilender. There are no references.

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AVAILABLE: Library of Congress

JJP/ksv

Card 9/9

14 July 1958

YANKIN, G.M.

AUTHOR: BRUDO, I.YA., YANKIN, G.M., Regular Members of the Society for Radiotechnology. PA - 2298

TITLE: Counter Lamps with Gas Discharge. (Gazorazryadnyye schetnyye lampy. Russian).

PERIODICAL: Radiotekhnika, 1957, Vol 12, Nr 2, pp 65-70 (U.S.S.R.)

Received: 4 / 1957 Reviewed: 4 / 1957

ABSTRACT: A short survey of counter lamps with gas discharge is given. First, the particular features of a gas discharge are discussed. As a basis for the mode of operation of these lamps the following phenomenon, which is due to local preparation by ions, must be considered: If voltage is once more applied to the electrodes before the end of de-ionization, the amount of the avalanche discharge U_3 is reduced. In electropositive gases the rest-ionization becomes extinct within from 10^{-4} ± 10^{-3} sec. Admixture of the electronegative gas (de-ionizer) and a reduction of the distance between the electrodes promotes the reduction of this time. It is also of advantage to use auxiliary electrodes which absorb the ion cloud from the discharge chamber. The structure and the mode of operation of these lamps is described. The nomenclature and terminology of the parameters of these lamps are not yet definitely settled. A table contains the data of the dekatrons produced by the industries of Great Britain and Germany. The wiring diagrams of the dekatrons with two-fold impulse are described. Two basic types must be distinguished: The "fast" ones, which have low resistance and produce impulses

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Counter Lamps with Gas Discharge.

with a steep front, and the "slow" ones. The most essential advantages offered by dekatrons with two-fold impulse compared to those of only one impulse are the reversibility, greater stability, and life. (With 1 table and 5 illustrations).

ASSOCIATION: Not Given
PRESENTED BY:
SUBMITTED: 14. 11. 1956
AVAILABLE: Library of Congress

Card 2/2

AUTHORS: Breydo, I.Ya., Member of the Association SOV/108-13-7-12/14
Yankin, G.M., Member of the Association

TITLE: Industrial Gas-Discharge Counting Tubes (Decatrons)
(Promyshlennyye gazorazryadnyye schëtnyye lampy (dekatrony))

PERIODICAL: Radiotekhnika, 1958, Vol. 13, Nr 7, pp. 80-86 (USSR)

ABSTRACT: The basic parameters and the constructional data of gas-discharge counting-tubes with cold cathode - the decatron, type YeG 1 and YeG 2 are described. The construction and technological factors are contradictory. Therefore, several varieties for the construction of the decatron and for its gas filling can be suggested. The construction described here was selected on the basis of considerations concerning production. In the process of transmission the short-termed increase of the positive potential at each subcathode at the expense of the current passing through its circuit after ignition plays an important part. This change of potential depends on the time-interval between the pulses and on the RC of the circuit. The conversion factor of the decatrons is, as the name implied, ten. The optimal regime of the decatron depends on the assumed circuit of the control system. A control system is

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described with the aid of which the velocity-limit of counting can be attained. The disadvantage of this device is its complicated feed circuit. A table shows the ratios of the counting velocity limits in the decatrons described here. The decatrons operate at a temperature of the surroundings of from -50° C to +60°C and at a relative moisture of 95-98% at +25°C ± 10°C. Decatrons are most in use in nuclear physics for various counting devices, among others also for multi-channel amplitude analyzers. There are 10 figures, 1 table, and 9 references, 2 of which are Soviet.

SUBMITTED: November 1, 1957

ASSOCIATION: Vsesoyuznoye nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (All-Union Scientific-technical Association for Radio Engineering and Electrical Communications im. A.S. Popov)

1. Discharge tubes--Production 2. Gases--Applications 3. Dischagre tubes--Circuits 4. Discharge tubes--Control systems

PEREL'MUTER, V.S.; YABLONSKIY, F.M.; YANKIN, G.M.

Glow-discharge digital indicator. Radiotekhnika 15 no.12:77-79 D '60. (MIRA 14:9)

1. Deystvitel'nyye chleny Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni Popova.
(Electronic calculating machines--Input-output equipment)

YANKIN, G.M.

PHASE I BOOK EXPLOITATION SOV/5211

Kaufman, Mikhail Simonovich, and Grigoriy Maksimovich Yankin

Elektronnyye pribory (Electronic Instruments) Moscow, Gosenergoizdat, 1960. 2d. ed., rev. 543 p. 15,000 copies printed.

Ed. (Title page): R. A. Nilender, Professor; Ed.: V. I. Shamshur; Tech. Ed.: K. P. Voronin.

PURPOSE: This book has been approved by the Ministry of Higher and Secondary Specialized Education, USSR, as a textbook for use in the course "Electronic Instruments" in tekhnikums. It may also be used by personnel engaged in the construction, operation, and use of electronic instruments.

COVERAGE: The authors describe the structure, theory of operation, and fundamentals of computation of electronic and semiconductor devices, and explain the relationship existing between parameters and structure of instruments, and the most important schematic flow diagrams of their application. Basic information on electronic theory and electron optics is given in Chapter I. The

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authors assume the reader to have a basic knowledge of mathematics, physics and general technical subjects in the vacuum-tube engineering program of tekhnikums. Chapters I - IV, XIII - XIV, XVI, and XVII and sections XV - 8 and XV - 9 were written by G. M. Yankin; Chapters V - XII, XV, and section IV - 7 by M. S. Kaufman. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

YANKIN, I.

27093

Zametki stakhanovtsa. (Iz vospominaniy dir pyshmin. Radoupavleniya laureata Stalinskoy. Premii). Lit zapns' M. Shur. Novyy mnr, 1949 No. 9, S. 181-209

C. Dobycha goryuchikh iskopayemykh

SO: LETOPIS' NO. 34

YANKIN, K.; PRUTKIN, Ya.

In response to readers' queries. Grazhd. av. 19 no.11:27 N '62. (MIRA 16:1)

1. Glavnyy meteorolog Glavnogo upravleniya Grazhdanskogo vozdushnogo flota (for Yankin). 2. Nachal'nik otdela truda i zarabotnoy platy Glavnogo upravleniya Grazhdanskogo vozdushnogo flota (for Prutkin).

(Weather forecasting) (Flight crews)

BAUMAN, Vladimir Eduardovich; IL'YENKOV, Viktor Ivanovich, dotsent, kand. tekhn.nauk; YANKIN, Petr Maksimovich; MARENKOVA, G.I., inzh., red.; BOBROVA, Ye.N., tekhn.red.

[Operating characteristics in the design of automatic control and telemechanics systems for railroads] Ekspluatatsionnye osnovy proektirovaniia ustroistv zheleznodorozhnoi avtomatiki i telemekhaniki. Pod obshchei red. V.I.Il'enkova. Moskva, Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia, 1960. 168 p. (MIRA 13:5)

(Railroads--Signaling)

ABRAMOV, V.V., doktor tekhn. nauk; CLYAVIN, Yu.V., kand. tekhn. nauk; NATANZON, Ye.I., inzh.; RESHNIN, N.Ya., inzh.; UGLOV, K.M., inzh.; YANKIN, P.V., inzh.

Effect of the temperature field on the nature of warping of a flat body after its temper hardening. Trudy GPI 17 no.3: 41-53 '61. (MIRA 16:12)

ABRAMOV, V.V., kand.tekhn.nauk; DATCHIKOVA, L.K., inzh.; YANKIN, P.V., inzh.

Investigating the stressed state in the wall of a mold for flat ingots considering phase transformations and plastic deformations. Trudy GPI 16 no.1 pt.2:9-13 '60. (MIRA 14:4)
(Strains and stresses) (Founding)

MALAKHOV, K.N.; SHEDURSKIY, S.F., inzh.; YANKIN, S.M., inzh.

Problem calling for immediate solution. Zhel. dor. transp. 43 no. 1:71-73 Ja '61. (MIRA 14:4)

1. Glavnyy inzhener Glavnogo gruzovogo upravleniya Ministerstva putey soobshcheniya (for Malakhov). 2. Nachal'nik otdela pod"yezdnykh putey Glavnogo gruzovogo upravleniya. Ministerstva putey soobshcheniya (for Yankin).
(Railroads--Rolling stock) (Railroads--Branch lines)

SIZYKH, Glafira Ivanovna; GAVRILOVA, Yuliya Pavlovna; LEONT'YEV, Andrey Pavlovich; CHERNICHKOV, Viktor Stepanovich; KHANDROS, Gersh Moshkovich; PODTSUYEVA, Lidiya Mikhaylovna; YANKIN, Sergey Mikhaylovich; GITKOVICH, V.K., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Advanced work methods for workers engaged in freight operations] Peredovye metody truda rabotnikov gruzovogo khoziaistva. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 91 p. (MIRA 15:3)
(Materials handling) (Railroads—Freight)

YANKIN, S. M., inzh.

New conditions in the operation of approach tracks. Zhel. dor. transp. 45 no.4:37-40 Ap '63. (MIRA 16:4)

1. Nachal'nik otdela pod"yezdnykh putey Ministerstva putey soobshcheniya.
(Railroads—Joint use of facilities)

YANKIN, V.V.

New method for boring cages of macaroni screw presses.
Khleb. i kond. prom. 1 no.4:36-37 Ap '57. (MLRA 10:5)

1. Kuybyshevskaya makaronnaya fabrika.
(Pressing machinery)

LAKHNO, R., kand. tekhn. nauk; YANKIN, Yu., inzh.

Abroad. Avt. transp. 42 no.8:59-61 Ag '64. (MIRA 17:10)

ARTEM'YEV, S.P.; AFANAS'YEV, L.L.; BELOUSOV, I.I.; BENENSON, I.M.; BRONSHTEYN, L.A.; BUYANOV, V.A.; VELIKANOV, D.P.; VERKHOVSKIY, I.A.; GORINOV, A.V.; GOBERMAN, I.M.; DAVIDOVICH, L.N.; DEGTEREV, G.N.; ZVONKOV, V.V.; KALABUKHOV, F.V.; KOMAROV, A.V.; KUDRYAVTSEV, A.S.; LIV'YANT, Ya.A.; PETROV, A.P.; PETROV, V.I.; TARANOV, A.T.; TIKHOMIROV, N.N.; FEDOROV, V.F.; CHUDINOV, A.A.; SHUPLYAKOV, S.I.; YANKIN, Yu.S.

Anatolii Pavlovich Aleksandrov; obituary. Avt.transp. 38 no.9:57 S '60. (MIRA 13:9)

(Aleksandrov, Anatolii Pavlovich, 1903-1960)

05487
SOV/141-2-2-12/22

AUTHOR: Yankina, A.A.

TITLE: Qualitative Investigation of the Potential in a Planar Magnetron

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1959, Vol 2, Nr 2, pp 244 - 253 (USSR)

ABSTRACT: The potential distribution in a planar magnetron is of interest in that it permits the determination of all the remaining characteristics of the device in its steady state. It is assumed that the magnetron is in the form of a planar diode situated inside an external magnetic field H . The field is parallel to the planes of the diode electrodes. The plates of the diode are large as compared with the distance between them, so that the boundary effects can be neglected. One of the plates produces a thermionic emission current having a density i_s , the emission being uniform and constant. The strength of the electric field is comparatively small so that the relativistic effects are negligible. The seconary emission is neglected. The problem can be solved on the basis of the classic electron theory (wave properties of the electrons are neglected) and it is assumed

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Qualitative Investigation of the Potential in a Planar Magnetron

that the electrons emitted by the cathode have the Maxwellian initial-velocity distribution. The collisions between the electrodes are not taken into account since it is shown that their relaxation length L is appreciably greater than the inter-electrode distances. A rectangular co-ordinate system is employed so that the origin of the co-ordinates coincides with the cathode, the axis x is perpendicular to the planes of the electrodes (towards the anode) and the axis z has the direction of the magnetic field. The number of electrons emitted by the unit area of the cathode in one second, having velocity components ranging from $\dot{x}_o$, $\dot{y}_o$ to $\dot{x}_o + d\dot{x}_o$, $\dot{y}_o + d\dot{y}_o$ and various $\dot{z}_o$, is given by:

$$dN = \frac{Nm^{3/2}}{\sqrt{2\pi}(kT)^{3/2}} \exp\left[-\frac{m}{2kT}(\dot{x}_o^2 + \dot{y}_o^2)\right] \dot{x}_o d\dot{x}_o d\dot{y}_o \qquad (1),$$

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Qualitative Investigation of the Potential in a Planar Magnetron

where N is the total number of the electrons emitted from 1 cm^2 of the cathode during one second and m is the mass of the electron.
The equations of motion for an electron are in the form of Eqs (2), where E is the component of the electric field in the direction of the axis x and c is the velocity of light in vacuum. The first integral of Eqs (2) is given by Eq (3), where $\omega \equiv eH/mc$ and φ is the potential with respect to the cathode. The Poisson equation for the system is given by Eq (4), where ρ' and ρ'' are the absolute values of the space charge density produced by the electrons proceeding from the cathode and to the cathode, respectively. The densities are defined by Eqs (5), where the integral should be taken over a specified region for each point of the inter-electrode space. If the electrostatic potential φ is normalised in accordance with Eq (6), Eqs (3) and (4) are in the form:

Qualitative Investigation of the Potential in a Planar Magnetron

$$\dot{x}^2 = \dot{x}_o^2 + 2(e/m)\Psi - 2\omega y_o x \qquad (7)$$

$$d^2\Psi/dx^2 = 4\pi\rho - eH^2/mc^2 \quad (\rho = \rho' + \rho'') \qquad (8) .$$

Eqs (5), (7) and (8), together with Eq (1), can be used to investigate the distribution of the potential in the inter-electrode space. Four cases are possible; these are defined by the first four equations on p 249. The first case corresponds to a weak emission and a weak magnetic field. The potential distribution can have the shape indicated in Figures 2. The second case corresponds to a low emission and a strongly magnetic field; the case is illustrated by the potential distribution curve shown in Figure 3. The third case corresponds to a moderate magnetic field and to a strong emission; the potential distribution is illustrated in Figures 4. The last case assumes the existence of a strong magnetic field and a

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high emission; the field distribution is illustrated in Figure 5.
There are 5 figures and 11 references, of which 4 are English, 1 French and 6 Soviet.

ASSOCIATION: Gor'kovskiy pedagogicheskiy institut (Gor'kiy Pedagogical Institute)

SUBMITTED: June 10, 1958

05488
SOV/141-2-2-13/22

AUTHOR: Yankina, A.A.

TITLE: Quantitative Solution of the Potential-distribution Problem in a Planar Magnetron

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1959, Vol 2, Nr 2, pp 254 - 261 (USSR)

ABSTRACT: In the preceding article (this issue of the journal, pp 244-253), it was shown that when the potential distribution is known, all the remaining characteristics of the steady-state operation of the magnetron can be easily evaluated. However, the equations describing the potential distribution could not be expressed in terms of known functions. Here, the problem consists of determining the potential distribution when the following quantities are given: magnetic field H; emission-current density i_s; the distance between the electrodes d and the anode potential φ_a. The case of particular interest corresponds to the existence of a potential minimum in the inter-electrode space. The problem can be solved qualitatively by means of approximate calculations. For this purpose,

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a potential distribution is first assumed, $\dot{x}$ is determined from Eq (7), ρ is then found from Eqs (1) and (5) (see the preceding article) and, finally, new values of the potential are determined from Eq (8). Such a solution is acceptable if the new values of the potential satisfactorily "coincide" with the originally assumed potential values. The number of approximations necessary to obtain an adequate accuracy depends on the choice of the zero approximation. The zero approximation is assumed to consist of two parts:
1) from the cathode to the potential minimum, the distribution takes into account the initial velocities of the electrons in the absence of the magnetic field;
2) the distribution from the minimum to the anode is constructed by taking into account the magnetic field but the initial velocities of the electrons are neglected. The following numerical example is evaluated: d = 0.5 cm, $i_s = 0.5$ A/cm^2, H = 100 Oe and $\varphi_a = 392.4$ V. The values of the normalised potential for this case are indicated in

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column 9 of Table 1, p 258. Column 10 of Table 1 illustrates the actual potential distribution calculated on the basis of the values of column 9. Column 11 of the table shows the potential for the following case: $d = 0.5$ cm, $H = 100$ Oe, $\varphi_a = 392.4$ V, $T = 1\,150$ °K and $i_s = 0.5$ A/cm^{-2}. The initial velocities of the electrons are neglected. Column 12 of Table 1 shows the potential distribution for the same case as above, except that the electron velocities are taken into account but the magnetic field is neglected. The case of a magnetron with the magnetic field higher than the critical value is illustrated in Table 2; this corresponds to the following: $d = 0.5$ cm; $i_s = 0.5$ A/cm^{-2}; $H = 200$ Oe; $\psi_a = 392.4$ V and $T = 1\,150$ °K. The values of the potential are indicated in column 8 of the table.

Table 2 also shows column 9, which illustrates the same case, except that the potential was evaluated by employing the equations of Braude (Ref 4). Further, column 10 of

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the table shows the potential for the same case but in the absence of the magnetic field. There are 1 figure, 3 tables and 6 references, of which 3 are English and 3 Soviet.

ASSOCIATION: Gor'kovskiy pedagogicheskiy institute (Gor'kiy Pedagogical Institute)

SUBMITTED: June 10, 1958

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YANKINA, [redacted] A. A. Cand Phys-Math Sci -- "Stationary current in a flat magnetron." Gor'kiy, 1960 (Saratov State Univ im N. G. Chernyshevskiy) (KL, 1-61, 181)

ACCESSION NR: AP4038651 S/0109/64/009/005/0890/0892

AUTHOR: Yankina, A. A.

TITLE: Theory of static mode in a plane-parallel magnetron

SOURCE: Radiotekhnika i elektronika, v. 9, no. 5, 1964, 890-892

TOPIC TAGS: magnetron, plane parallel magnetron

ABSTRACT: The effect of the magnetic field strength H upon the anode-current density j_a, at a constant anode voltage, can be calculated on a point-by-point basis, which yields the distribution of potential. The latter is required for determining the integration range in $I_a = \int e dN$, where e is the electron charge, $dN = (N/\gamma 2\pi)(m/kT)^{3/2} \exp[(-m/2kT)(\dot{x}_0^2 + \dot{y}_0^2)]\dot{x}_0 d\dot{x}_0 d\dot{y}_0$ is the number of electrons emitted by a unit surface of the cathode per sec with velocities of from $\dot{x}_0$, $\dot{y}_0$ to $\dot{x}_0 + d\dot{x}_0$, $\dot{y}_0 + d\dot{y}_0$ and with all possible $\dot{z}_0$. Necessary and sufficient conditions for an electron to

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